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Strategic Management of Family Planning Programs

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Program management — especially logistics management — remains the Achilles heel of family planning programs.

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This paper — a product of the Population Policy and Advisory Service, Population and Human Resources Department — is a background paper prepared for a review of effective family planning programs. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Otilia Nadora, room S6-065, extension 31091 (September 1992, 46 pages).

Program management has received insufficient attention among family planning leaders, possibly because of the medical/demographic background of many leaders, a focus on other program priorities (such as sheer survival), the pressure to expand programs rapidly, and limited donor interest in the subject.

As programs grow in complexity, the problems resulting from weak management systems become more obvious, and organizations are compelled to introduce rational systems. The more successful family planning programs have paid close attention to key aspects of management and have striven to continually improve their systems.

According to the principles of strategic management, there is no single "best" solution to the various problems organizations face. Each organization must work out a response appropriate to a given situation. But managers should know more about possible options and their effectiveness in other settings. In family planning, a dearth of research on options — compounded by the fact that many programs do not collect basic information about program inputs and outputs — makes it difficult to analyze which programs work and why.

Logistics management is the Achilles heel of family planning programs. Many programs experience depleted supplies of contraceptives in demand and oversupplies of others. Lack of contraceptives not only leads to pregnancies but erodes client trust in the service provider and undermines staff morale. Measures to improve logistics management are readily accessible. What is lacking is a commitment from high-level managers to introduce the needed changes.

Staff development also merits more attention from managers, as high-caliber staff can make a big difference in program performance. Managers do not always have flexibility about staff recruitment, promotion, and retention, but they should strive for as much leverage as possible. Little research has been done on the impact of training, so managers should assess the relative effectiveness and costs of different approaches. The key factor seems to be the relevance of the training content to the individual's job responsibilities.

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STRATEGIC MANAGEMENT OF FAMILY PLANNING PROGRAMS

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Executive Summary

Strategic management is a tool that can be used to guide an organization through sequential stages of development, from emergence to growth, consolidation and sustainability. The focus of strategic management is on adaptation to the local political and socio-economic environment. The premise is that various structures and approaches can be equally effective, provided that they are appropriate in the local setting. Organizations need to be adaptable and to have specific mechanisms to assure program responsiveness to successive opportunities.

To establish and maintain successful family planning programs, managers should concentrate on seven areas:

1. **Strategic planning**—Both public and private organizations need to have a specific goal and well-defined strategies, based on an analysis of internal and external conditions. Successful programs tend to focus initially on a single goal and then diversify gradually; new programs are implemented in phases.

2. **Initiatives to influence the environment**—Effective organizations seek to influence their environment by cultivating increased political and public support, involving the community in programs, and promoting services to potential users. Complete community participation may conflict with the goals of family planning programs, but some elements of community involvement can benefit programs.

3. **Structure consonant with strategies**—Structural characteristics associated with effective programs include autonomy, use of interorganizational networks, and decisionmaking at appropriate levels in the system. The research findings in regard to the integration of family planning programs and/or administration with other development sectors are mixed, and therefore managers should evaluate the merits of integration in their local setting.

4. **Information systems**—Managers need regular and timely information on program inputs and performance in order to make appropriate decisions. Information systems should be simple in order to provide fast feedback throughout the system. Operations research, patient flow analysis and other research techniques can be used to supplement service statistics and other program reports.

5. **Human resources**—Developing a strong staff is key to successful program implementation. Personnel recruitment, motivation, training and supervision require special attention. Flexibility in hiring, awarding promotions, and firing enables managers to build a strong staff. Various training options need to be studied to determine the most effective techniques.

6. **Supply and logistics systems**—Ensuring continuous availability of contraceptives and other necessary supplies at all program levels is crucial to the success of any family planning program, but is often neglected. Most programs need an improved logistics information system, greater staff training and supervision, and introduction of other techniques and procedures in order to make logistics systems more efficient.

7. **Leadership**—Leaders play many important roles in family planning programs, including generating enthusiasm, promoting growth and innovations, fostering political support, mobilizing bureaucracies, and inspiring workers.

This review has identified three areas in particular need of attention from program managers and donor agencies:

1. Research on strategies, structures and cost-effective interventions;
2. Management information systems that provide timely information on program inputs and outputs; and
3. Improved logistics management systems.

In many family planning organizations, managers lack sufficient information to make informed decisions, and staff at all levels of the system receive little feedback on their work. In addition, supply shortages or misallocations are common.

Strategic management principles can be seen in many successful family planning programs. These programs have been able to identify and overcome obstacles and to capitalize on opportunities in their environment. Their problems, failures and triumphs provide valuable lessons for program managers.

I. Introduction

Analyses of family planning (FP) programs throughout the world have concluded that the most successful ones have been highly sensitive to their socio-cultural and political environment and have adapted their programs in response to specific local situations. This need for congruence with the environment is one of the major tenets of the strategic management approach. Some family planning programs have succeeded despite unfavorable conditions such as pronatalist attitudes and poor transportation and communication systems. These programs have avoided defeat by seizing opportunities presented by their environment and managing their resources wisely.

After studying programs in various development sectors, management specialists have concluded that successful programs have certain qualities in common but that various structures and approaches can be equally effective, provided that they are appropriate in the local setting. Thus, there is no single prescription for "correct" organizational development and program implementation. Nevertheless, there are principles emanating from program experiences that suggest appropriate responses to various factors in the external environment.

The purpose of this paper is to identify the lessons learned in regard to the management of key components of both newly established and long-standing family planning programs. Where possible, differential approaches according to the stage of program development and type of program are discussed. The implementation of strategic management principles is discussed in terms of an organization's strategy, structure and process.

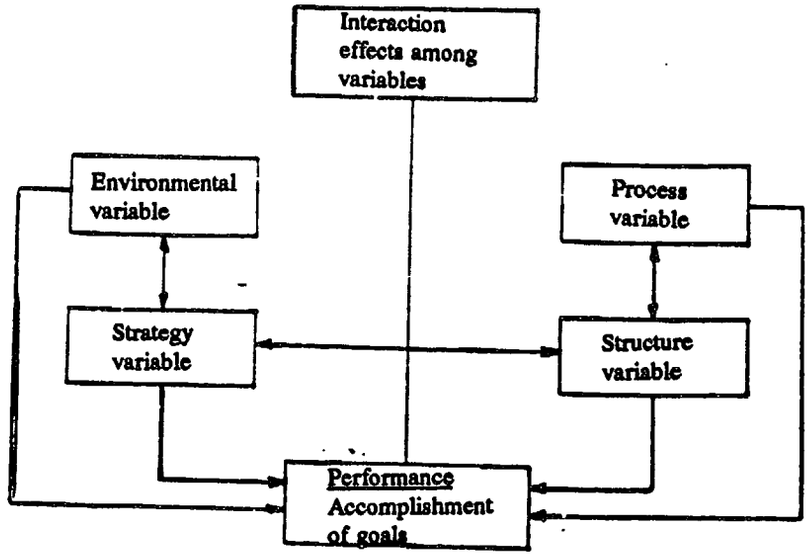
II. Strategic Management as a Tool

Management expert Samuel Paul has defined strategic management as: "the set of top management functions which influence the design and orchestration of the strategy, organisational structure and processes of a programme in relation to its environment" (Paul, 1983:76). This definition has several key elements:

- **Top management**—managers are responsible for eliminating bottlenecks and intervening when necessary to improve program performance.
- **Design and orchestration**—both planning and implementation are important.
- **Strategy**—managers must make choices regarding program goals, services, policies and work plans.
- **Structure**—managers need to look closely at organizational components, the distribution of authority and reporting relationships within the program to ensure maximum effectiveness.
- **Process**—participation in decisionmaking, motivation, training, evaluation and other factors influence the behavior of program staff and beneficiaries.
- **Environment**—programs need to be adapted to the political, economic and social forces in a country or area, the characteristics and attitudes of the beneficiary group, and key external actors.

See Figure 1 for a schematic illustration of these variables and their interaction.

Figure 1. Strategic Management: The Basic Variables and Their Interaction



Source: Paul, Samuel. *Managing Development Programs: The Lessons of Success*. Boulder, CO: Westview Press, Inc., 1982. p. 104.

As Gayl Ness points out, strategic management is old in the sense that it is simply "paying close attention to the organizational system over which the manager has control" but new in the sense that it is a skills and management technology, not a magic cure that can be imported from abroad (Ness, 1988:6). Managers must be both knowledgeable and motivated to implement the principles of strategic management.

In a review of successful development programs, Samuel Paul (1983) abstracted the following elements of strategic management which the programs had in common:

- Initial focus on a single goal or service;
- Sequential diversification of goals;
- Phased program implementation;
- Organizational autonomy;
- Use of network structures;
- Use of simple information systems with fast feedback; and
- Flexible staff selection and training processes.

Paul concluded that the organization's goals and organizational structure must be congruent with its environment. Different organizational structures can be effective in implementing programs, depending on the environment and other program elements, which must be consistent among themselves. Organizations need to be adaptable and to have specific mechanisms to assure program responsiveness to successive opportunities.

III. Stages and Challenges in Program Development

A. Stages of Program Development

Management goals and functions differ markedly in relation to the maturity of a program. For example, a newly established program operating in a hostile environment faces different problems than a highly developed program concerned with improving the quality of services and generating income. Vriesendorp et al. (1989) developed a summary of management issues for private and public-sector family planning programs, based on a four-stage model of program development (see Tables 1 and 2). The four stages they identified are:

1. **Emergence**—the initial phase of newly established organizations in which survival is paramount;
2. **Growth**—a period of expanding services and strengthening political support;
3. **Consolidation or Maturity**—a time focused on increasing efficiency and effectiveness; and
4. **Sustainability**—a period of political and/or financial self-sufficiency characterized by broad public support for family planning.

Organizations do not necessarily progress steadily through the four stages; some will cease functioning, while others will regress or stagnate (Vriesendorp et al., 1989). Factors which affect organizational development include not only management but also the external environment, the nature of the family planning system, and the influence of international donors.

Countries with contraceptive prevalence rates of less than 10 percent could be considered to be at the emergence stage. This category would include most countries in sub-Saharan Africa, several countries in the Middle East and Asia, and government programs in many Latin American countries. Most government family planning programs in Asia and private programs in Latin America and the Caribbean are in the growth stage, with contraceptive prevalence rates in the range of 10-50 percent. Perhaps a dozen programs have reached the consolidation/maturity stage, with contraceptive prevalence rates of more than 50 percent. No family planning program in developing countries can be characterized as having reached the sustainability phase. Therefore, this paper will focus primarily on the first three stages.

A similar typology developed by John Stover has five stages, with more differentiation in the emergence and growth stages. Stover's five stages are: 1) pre-emergence, with less than 8 percent of married women of reproductive age using modern contraceptive methods; 2) launch, with 8-15 percent prevalence; 3) growth, with 16-34 percent prevalence; 4) consolidation, with 35-44 percent prevalence; and 5) mature, with prevalence of 45 percent and higher (U.S. Agency for International Development, 1989). The advantage of the typology developed by Vriesendorp et al. is that it focuses on programs, rather than countries.

Vriesendorp et al. (1989) divide organizational management tasks into four components:

1. **Mission**—the major goal of the organization, which is agreed upon and understood by key constituencies, staff, and others affiliated with the

Table 1. Management Issues for Private-Sector Organizations at Four Stages of Program Development

MANAGEMENT COMPONENT	STAGE 1 EMERGENCE	STAGE 2 GROWTH	STAGE 3 CONSOLIDATION	STAGE 4 SUSTAINABILITY
MISSION	As defined by founders. Focus on municipal/regional targets, with ample service mix. Critical Task: Define target population/services.	Newly defined. Critical Task: Test ability to succeed in light of barriers to entry.	Under re-examination with concern for self determination and sustainability. Critical Task: Expand definition of target population, service/product mix; explore links with public sector.	Success is fulfilling mission as re-interpreted by the Board of Directors. Critical Task: Re-define mission in light of changes in environment and roles of public/private sectors.
STRATEGIES	Emphases on external environment including donor support. Critical Task: Surmount barriers to entry, such as • external policy environment • funding • service delivery competence.	Characteristically donor directed, focused on establishing service delivery competence. Critical Task: Expand service delivery built upon effective marketing for increased funding and increasing FP clients; surmount the competition.	Formal strategy development to consolidate gains and deal with more complex internal and external management. Critical Tasks: Develop capacity to produce/deliver quality services/products thru cost containment/ recovery, quality control, diversification of funding sources, and marketing.	Focus on matching organizational competence with present needs/future possibilities. Critical Tasks: Maintain strong, local, diversified financial base. Respond to needs of market. Stay competitive. Maintain strategic mind-set.
STRUCTURE	Fluid. Direct executive control. Project geared. Board and staff functions not clearly delineated.	Centralized. Project-based. Critical Tasks: Develop effective structure for implementation; Develop Board of Directors, representing various stakeholders.	Empowered Board of Directors. Defined Board/Staff roles. Critical Task: Re-align structure with new strategies.	Congruent with strategies. Synergistic Board/Staff relations. Critical Task: Re-align structure as needed to support strategies.
SYSTEMS	Minimal and informal. Critical Task: Meet donor requirements; provide timely contraceptive supplies.	Minimal to basic. Inadequate for informed decision-making. Critical Task: Meet donor requirements; develop personnel, financial, and logistics systems to support expansion.	Basic systems for effective functioning and decision-making. Critical Task: Develop systems for monitoring, controlling, evaluating for efficiency and effectiveness.	Management systems support changing roles. Critical Task: Provide management information allowing appropriate innovation and change.

Source: Vriesendorp, Sylvia et al. "A Framework for Management Development of Family Planning Program Managers." Paper presented at the Annual Meeting of the American Public Health Association, Chicago, IL, October 24, 1989, Annex 1.

Table 2. Management Issues for Public-Sector Organizations at Four Stages of Program Development

MANAGEMENT COMPONENT	STAGE 1 EMERGENCE	STAGE 2 GROWTH	STAGE 3 MATURITY	STAGE 4 SUSTAINABILITY
MISSION	Same as mandate. Tentative government support. Not clear which Min./group in charge.	Development of broad goals and policy objectives (mission) based on m date.	Broad goals and policy objectives established and supported by key political and public leaders.	Family Planning supporte' y all. FP is a public good d a basic right.
	Critical Task: Identify key actors/constituents in government and public.	Critical Task: Clarify mission for key actors/constituents in order to gain support.	Critical Task: Maintain political support; develop strong constituencies among users.	Critical Task: Re-define goals and objectives as the environment changes.
STRATEGIES	Donor-driven, politically suspect.	Donor-influenced, politically more acceptable.	Reflect awareness of different pop. targets; threat of reduced funding; concern for efficiency.	Responsive to changing goals and objectives; responsive to needs of key constituencies.
	Critical Tasks: Generate internal political support. Establish competence in service delivery.	Critical Tasks: Increase internal political/financial support; organize for service expansion, with focus on effectiveness.	Critical Tasks: Develop market segment strategies; contain costs; explore cost recovery options; explore public-private sector roles.	Critical Tasks: Maintain a strategic mind and identify key strategic issues and formulate appropriate strategies; innovate.
STRUCTURE	Centralized and vulnerable to political influences; ill-defined, no clear locus for FP.	Established administrative locus. Centralized, bureaucratic, subject to political influences.	Structure reflects major strategic directions.	Flexible structure, aligned with public sector trends and strategic choices.
	Critical Task: Develop and clarify roles/responsibilities of departments and bureaus.	Critical Task: Align structure to support broad strategies.	Critical Task: Develop staff capability to manage change.	Critical Task: Maintain flexibility, congruence with mission and strategies.
SYSTEMS	Basic systems inherited from larger bureaucracy. Inadequate for informed decision-making.	Perceptic1 of inadequacies of current systems.	All management systems in place.	Management systems are used purposefully.
	Critical Task: Meet donor requirements; provide timely contraceptive supplies.	Critical Task: Explore needs and develop staff capability in basic system design and use.	Critical Tasks: Improve systems for monitoring, controlling, and evaluating for effectiveness and efficiency.	Critical Task: Provide management information to allow appropriate innovation and change.

Source: Vriesendorp, Sylvia, et al. "A Framework for Management Development of Family Planning Program Managers." Paper presented at the Annual Meeting of the American Public Health Association, Chicago, IL, October 24, 1989, Annex 1.

organization and is translated into values that guide the staff in their daily work;

2. **Strategies**—the conceptual framework in which the organization's goals are implemented;
3. **Structure**—the framework of the organization, in which roles and responsibilities are clearly defined at each level;
4. **Systems**—methods of monitoring inputs and outputs in order to evaluate the organization's performance in implementing its strategies.

The specific tasks for each component are shown in Tables 1 and 2 and will be discussed in more detail later.

B. Goal-setting

In each of the four stages of program development, family planning organizations need to understand the crucial aspects of their mission. In Stage 1, Emergence, the need to continue functioning is clear. However, organizational survival depends not only on weathering financial crises but also on fortifying support among politicians and opinion leaders. In this initial stage, organizations are concerned with establishing services and serving needy groups, which are usually hard to reach. Private organizations need to define their target population and decide on the types and locations of services they will offer. Since government agencies often share responsibility for family planning, their major mission is often to clarify each agency's role and responsibilities.

In Stage 2, Growth, family planning organizations settle into an organizational identity and attempt to assess their strengths and weaknesses in order to increase their effectiveness. Private organizations tend to be focused on expanding and promoting services and marketing themselves in order to increase their funding. Similarly, government agencies are concerned with gaining the support of key decisionmakers and demonstrating the need and acceptability of their services. In this stage, organizations are seeking to develop cost-effective programs, be innovative and coordinate activities with other organizations.

In Stage 3, Consolidation and Maturity, organizations have achieved some level of stability and are able to reflect on unmet needs, possible improvements in service delivery and other areas, and ways to ensure financial sustainability. For private organizations, this stage might involve a reassessment of their target population and service/product mix and exploratory alliances with government and other private agencies. Government agencies must continue to be concerned with maintaining political support; a concern with client satisfaction may emerge.

In Stage 4, Sustainability, organizations must continue to redefine their mission as the external environment changes and as the roles of public and private family planning agencies evolve. Financial sustainability requires a diversified financial base for private organizations and widespread political support for government agencies. Achieving financial sustainability forces the organization to examine and become involved in income generation, cost containment and client satisfaction.

Ideally, organizations should institute long-range planning and build in sustainability mechanisms early in their development. However, the struggle for survival and political and public support often distracts organizational leaders from such long-term considerations.

IV. Strategic Planning

Strategic planning is the process of determining what an organization will be in the future and what steps it will take in order to reach that point. This process includes a determination of: 1) the organization's mission or goals; 2) the programs, services or products that will be offered in order to accomplish this mission; and 3) a plan for attracting and utilizing the necessary resources such as people, money and facilities (Barry, 1986). Strategic planning differs from operational or short-range planning in that it covers a longer time frame—perhaps five years rather than the one year typical of work plans and budgets.

The basic components of strategic planning are:

1. An analysis of institutional strengths and weaknesses, including its current and future financial picture, programs, services, client groups, management, structure and systems;
2. An environmental analysis, including current clients, potential markets, donors and competitors; and
3. Development of a strategic plan, which includes a mission statement, 3-5 year institutional goals, programmatic and financial objectives, decisions on new markets and services, specific strategies for achieving objectives, and restructuring of organization, management systems and services to implement the new directions effectively (Management Sciences for Health, 1988).

This process is also known as a SWOT analysis (strengths, weaknesses, opportunities and threats). Strategic planning provides a vehicle for making strategic decisions and achieving consensus among top managers. The process of collecting information and following an orderly and rational decisionmaking process is intended to reduce risk and increase the chances of long-term organizational viability.

Strategic planning is not a panacea for all management problems. Cobb (1989) describes an organization that committed itself to a new direction without fully examining the demand for the new services and without developing a marketing plan or allocating funds to implement the new services. As a result, the organization was neither providing the previous volume of services nor generating sufficient funds from the new services. Major shifts in an organization's mission need to be assessed carefully and incorporated into day-to-day operations or the anticipated benefits may not materialize.

A. Strategy as a Function of Organizational Development

Returning to Tables 1 and 2, the major strategies organizations pursue vary greatly according to their stage of development, their environment, and overall mission.

Organizations in Stage 1, Emergence, need to strengthen their position by increasing political support, developing competence in service delivery, and securing continued funding. Newly established government programs may rely on external funding and therefore be politically suspect, requiring special efforts to win internal support.

In Stage 2, Growth, organizations are focused on expanding services, increasing their caseload, and improving organizational effectiveness. Both public and private organizations are heavily influenced by their donors at this stage. Private organizations are also concerned with marketing their services and surmounting the competition.

In Stage 3, Consolidation or Maturity, organizations develop a formal strategy in order to meet internal management needs and respond to a more complex external environment. Both public and private organizations have to be concerned with marketing their services, improving the efficiency and quality of their services, and exploring cost-recovery and cost-containment options. Many organizations at this stage face funding cutbacks from their key donors and must adopt a variety of cost-cutting and fundraising measures to maintain their services. Due to funding limitations, both public and private organizations may develop a stronger interest in further defining their respective roles and allocating responsibilities in order to reduce duplication.

In Stage 4, Sustainability, private and public organizations must maintain their present level of competence while remaining alert and responsive to new opportunities. Private organizations are concerned with maintaining a diversified financial base and remaining competitive, while government agencies must continue to meet the needs of key constituencies.

B. Strategy Formulation

Ickis (1987:149) defines a strategy as an organization's "pattern of major objectives or goals and the policies and plans that are essential for achieving those goals stated in such a way as to define the activities in which an organization is engaged, and the kind of organization it is to be." Paul (1982) describes two basic components of an organization's strategy:

1. **The Service-Beneficiary-Sequence Strategy**—determination of what the program's service or output will be, for whom it is designed, and when it will be provided. Key dimensions of services are whether they are single or multiple, integrated or unrelated, and measurable. Services need to be differentiated to meet the variable needs of beneficiary groups. Sequential expansion and diversification must be built into services over time in order to adapt to environmental complexity and service-beneficiary diversity.

2. **The Demand-Supply-Resource Strategy**—identification of the key tasks and functions needed in order to achieve organizational goals. For most programs, these tasks include public response to or demand for the service, supply or service delivery, and mobilization of resources. Demand generation is based on the beneficiaries' ability and willingness to change their behavior. Supply is derived from the requirements of the demand for services. Resource mobilization focuses on key actors in the environment such as political and administrative leaders and opinion leaders.

Strategic interventions or activities are derived from these two components.

As Ickis (1987) points out, public-sector family planning organizations must accept their major purpose as a given, but they do control four elements that give expression to this larger objective:

1. **The type of contraceptive methods and services provided.** Based on an analysis of successful development programs, Paul (1982) concluded that programs that focus on a particular service rather than a broad range of services are usually more effective. Roper (1987) describes the program development of Profamilia, the family planning association of Colombia, as evolutionary during its 20-year history, in response to its environment.

2. **The target client population.** Ickis (1987) observes that in the field of enterprise management, organizations which concentrate on a particular population segment are usually more successful because they can act creatively to meet this group's unique problems and needs.

3. **Distribution channels.** Possible choices include clinic-based, community-based and commercial programs, depending upon the client population, geographic coverage, and cost factors.

4. **Source of funding.** For public-sector organizations, budget allocations from the central government are often supplemented with funding from international agencies. Private organizations may be more dependent on external donations, local fundraising and fee payments.

Ickis notes that these four elements are interrelated and therefore must be consistent. For example, the choice of contraceptive methods will limit the choice of distribution channels; surgical methods are not appropriate for distribution through community-based programs or pharmacies.

Maru (1989) states that a well-articulated program strategy helps to improve effectiveness by directing scarce resources to the necessary activities and allowing selective monitoring of high priority process and output variables. Effectiveness is also related to the ability to change strategies as the program evolves.

V. Influencing the Environment

The most successful family planning programs not only adapt to their environment but also actively seek to influence it. There are three major ways to accomplish this: fortify the organization's legitimacy, or claims for public support; involve the community in program planning and implementation; and generate demand for information and services.

A. Pursuing Legitimacy

The political system can influence family planning programs in several ways: by strengthening the capacity to implement central policy, by transmitting favorable statements by political leaders down to the grassroots level, and by organizing community support for family planning (Freedman, 1987). Lapham and Mauldin found three political factors strongly correlated with the strength of family planning program effort: the existence and strength of a policy for fertility control and family planning; supportive statements by top political leadership; and the bureaucratic level of the leadership of the family planning program (Freedman, 1987). While this correlation suggests that the political system may influence the family planning

program, it also supports the idea that more effective programs take steps to strengthen political support.

Most family planning programs in Stages 1 and 2, Emergence and Growth, must devote considerable effort to promoting the legitimacy of family planning. In the early stages of programs, policymakers and opinion leaders typically hold negative views about family planning or assign it low priority. The task of family planning organizations is to raise its visibility and increase awareness of its benefits. Keller et al. (1989) state that the following activities have been effective in generating political commitment: conducting and disseminating the results of studies analyzing the consequences of unregulated fertility or high rates of population growth for maternal and child health (MCH) and for socio-economic development; publicizing the results of cost-benefit analyses and modeling of future socio-economic trends; and persuading grassroots organizations such as women's groups and labor unions of the importance of family planning for health and social development.

In addition, Finkle and Ness (1985) point out that good management itself can generate political support, since political leaders like to associate themselves with effective programs. An example of this bandwagon effect can be seen in Oyo State, Nigeria, where high-level state Ministry of Health officials waited until the family planning project had demonstrated its success before backing it (Seidman and Horn, 1989a).

Finkle and Ness (1985) list three indicators of political support: positive statements from political leaders, creation of a specialized structure for family planning, and providing resources to the family planning program. Public statements from leaders help to facilitate the other two indicators by lending the program legitimacy. They point out that such statements have three major effects: 1) ensuring that other government agencies will be more cooperative and supportive (such as the Finance or Planning Ministry that must approve budgets and foreign exchange transactions); 2) increasing staff morale and commitment; and 3) informing the public, including potential and current clients, community leaders and local government officials, that family planning is a valued activity for national and individual welfare (Finkle and Ness, 1985).

Indonesia provides an excellent example of the way that the commitment of the president to family planning was passed down through the political system down to the village level. The mobilization of religious and community leaders also helped to broaden public support (Paul, 1983). The value of political support can be seen in the effects when it is withdrawn. In Malaysia, the Prime Minister reversed the country's long-standing antinatalist policy in 1982 by declaring that it was underpopulated and needed more people for its economic security. Subsequently, the family planning organization found that its budget and personnel requests were questioned more thoroughly than before, its headquarters was moved out of town, opponents of family planning became more vocal in Parliament, and staff morale plummeted (Finkle and Ness, 1985).

Obtaining supportive statements from political leaders should be seen as an ongoing activity, and each statement should be publicized to the fullest extent possible. In Indonesia, family planning leaders made a concerted effort to persuade high-level political leaders to make public statements and participate in ceremonies and public gatherings to show their support. This high-level commitment was amplified by publicizing statements from the president and others in the media, providing copies to other national, regional and local leaders and asking them to make

supportive statements and talk with their peers. Personal contact with political leaders at all levels was a key factor in eliciting their active participation (Suyono, 1989a).

B. Community Participation

The concept of community participation is widely promoted, although its operational implications for family planning programs and its relative effectiveness in increasing contraceptive use are unclear (Askew, 1989). Few, if any, family planning programs fulfill the criteria implied in a general definition of community participation: "an educational and empowering process in which people, in partnership with those able to assist them, identify problems and needs and increasingly assume responsibility themselves to plan, manage, control and assess the collective actions that are proved necessary" (Askew, 1989:186). Researchers who have studied community participation projects closely have concluded that the goals and structure of most family planning programs may be ill suited to the bottom-up, self-determined and idiosyncratic nature of community participation projects (Askew, 1989; United Nations Economic and Social Commission for Asia and the Pacific, 1988).

Based on a study of community participation projects in five South Asian countries, Askew concluded that total community participation is not "feasible, or even desirable," within family planning association projects, and probably is even less possible within government projects (Askew, 1989:201). An ESCAP analysis of government-supported community participation projects in five Asian countries concluded that "the most successful examples of community participation can be found in NGO [non-governmental organization] projects that are needs-oriented rather than population-control oriented, and in government programmes that provide family planning primarily as a contributory factor in improving maternal and child health" (United Nations Economic and Social Commission for Asia and the Pacific, 1988:23). ESCAP concluded that family planning programs that are linked to demographic targets may not be appropriate for community participation, since such programs require centralized, top-down planning to achieve their contraceptive targets. ESCAP speculated that greater community participation would probably decrease the efficiency of family planning programs (United Nations Economic and Social Commission for Asia and the Pacific, 1988).

The involvement of community members in program management is problematic because private and public family planning agencies tend to be bureaucratic, with maximum control retained by staff responsible for service provision. Involving community members in planning and managerial procedures presents many difficulties. Also, family planning agencies become involved in community participation as a way of expanding services at the community level. Family planning leaders consider other objectives of community participation such as promoting community self-reliance and empowerment to be beyond their mandate and capabilities.

Another limiting factor is that the single focus of family planning programs may be antithetical to the idea of community participation, which is that the community decides what is important. Wolfson (1987) provides some examples of primary health care projects in which the community's interest in family planning increased, remained low, or declined. Thus, it cannot be assumed that communities will always opt for more family planning services. Whether the project managers should accept the community's lack of interest or try to increase their awareness is a controversial issue.

Despite these caveats, family planning programs have benefited from using some elements of community participation, especially in the area of demand creation. Family planning programs have involved a wide spectrum of community members in demand creation, service provision, management and resource contribution. Participation by community members has included involvement in committees with limited responsibilities for planning and management, provision of information and some services, organization of specific activities, and periodic collective action to raise awareness or generate income or other resources. Family planning associations also consult with the community when planning project activities, and this area could be more fully developed. Community diagnosis or needs assessment is another area in which community members could participate more fully (Askew, 1989).

Indonesia provides some of the best examples of the ways that community members can be involved in family planning program-

- Family planning fieldworkers recruited acceptors willing to serve as volunteer motivators and to provide resupplies to continuing users;
- Fieldworkers organized groups of 15-60 acceptors who support each other to continue contraceptive use, exert subtle pressure on non-users, and are eligible for low-interest loans for cottage industries and other income-generation purposes;
- Family welfare organizations for women were established at the sub-village level up to the national level;
- Mobile teams have been organized to provide integrated health, family planning and social services at the community level, even in remote areas;
- Youth cadres have been set up in subdistricts and villages to educate youth about family planning; and
- Village leaders and others have been involved in regular community meetings (Suyono and Shutt, 1989).

While the impetus for these activities has been largely outside the community, they have served to involve community members and give them a sense of ownership of the family planning program.

Keller et al. (1989) list several difficulties in implementing community participation:

- Community members may resist the idea of managing services themselves or of bearing financial responsibility for services if they perceive that more privileged groups are treated differently;
- Governments may feel threatened by the empowerment of any group outside official structures; and
- Selecting politically well-connected groups or individuals may lead to reduced access to services or mistrust, while choosing less favored individuals may create government resistance.

These problems underscore the need to assess each community carefully before initiating new programs.

In regard to the effectiveness and costs of community participation, little information exists. Askew (1989) reported that the seven projects managed by family planning associations

achieved acceptance rates above their respective national levels, although no causality can be inferred because the relationship between the extent of participation and the level of contraceptive use was not examined. Research is needed to determine whether community participation is less costly than other modes of service delivery (Wolfson, 1987). Despite the fact that financial self-sufficiency is a goal of community participation projects, ESCAP found that resource contributions from communities cannot be relied upon and recommended that managers budget for the total costs of such projects unless the community's contribution has been agreed upon in advance (United Nations Economic and Social Commission for Asia and the Pacific, 1988).

Most analyses of community participation in family planning have been conducted in Asian countries. Therefore, little is known about the merits of community participation in Africa or Latin America.

C. Demand Generation

One of the clear lessons learned from family planning programs is that clients do not automatically flock to a new service; potential users of the service need to be informed of its availability and its benefits for them. Efforts to attract clients to a service site are known as "demand generation," which is somewhat of a misnomer because it implies that people have to be persuaded and cajoled to use family planning services. In practical terms, many women and men are interested in limiting and spacing births but may not be sufficiently motivated to use family planning services (i.e. to overcome their fear of contraceptive side effects, their humiliation resulting from poor treatment by clinic staff, or their spouse's disapproval). The task is not to pressure people to use services but rather to explain how the services meet a felt need.

Furthermore, no amount of glitzy advertising can compensate for poor services. High-quality services, including technical competence, a range of methods, and skillful counseling, are more likely to attract new users and support their continued use (Bruce, 1989). Based on simulation models assuming improved continuation rates, Jain concluded that "recruiting a small number of accepters per year and taking good care of them is a better strategy than trying to recruit a large number of acceptors whose needs cannot be met by the program." (Jain, 1988:43) In areas with low demand for contraception, Jain (1988) asserts that satisfied contraceptive users would help to recruit additional users. Thus, demand generation needs to be seen in relation to the total service delivery system and the environmental context.

The demand for family planning services is a highly amorphous concept, since it encompasses perceptions about the value of children, family size and child spacing desires, attitudes regarding family planning methods and services, and past experiences or knowledge of service outlets and specific contraceptive methods. Surveys conducted in a number of countries have found that, even in countries in which desired family size is large, a significant group of women wishes to limit or space births (Middleton and Lapham, 1987). In most countries for which Demographic and Health Survey results are available, a majority of women say they approve of family planning. When asked why they are not currently using family planning and not planning to do so, women express a variety of concerns, including lack of knowledge about specific methods, fear of side effects, previous experiences with contraception, disapproval of their spouse or others, cost, accessibility, and religious beliefs. The relative importance of these concerns varies considerably from country to country and within countries.

The manager's job is to find out which of the impediments to contraceptive use are salient and then address them through appropriate information, education and communication (IEC) programs. Such programs might include mass media campaigns, extension education, group meetings, print materials, formal and nonformal education, home visits, and traditional media, depending upon the target audience. Satia (1987) points out that demand-creation activities such as IEC and incentives/disincentives require flexibility, experimentation and willingness to work closely with program beneficiaries to learn about and respond to local needs.

The nature of demand generation activities will vary according to each program's developmental stage. Programs at Stages 1 and 2, Emergence and Growth, are likely to stress broad public education about family planning and service sites, while more advanced programs may focus educational interventions on specific groups or on major barriers to wider use. While most family planning programs in developing countries focus on preventing unplanned pregnancy, programs in areas in which desired family size is close to actual fertility may also need to educate people on the benefits of smaller families.

VI. Structural Issues

Ickis (1987:146) states that "structure is not a given, but a variable that may be controlled by management." According to Ickis (1987), the particular form that a structure may take depends upon the characteristics of the program environment, the orientations and motivations of program workers, and program objectives, as they are translated into specific activities and policy guidelines.

Ickis (1987) identified four types of organizational structures found in family planning programs:

1. **Entrepreneurial**—highly informal structures with flexible procedures, frequent recognition of individual contributions, and plentiful job-intrinsic rewards. The private demographic associations that emerged in Latin America typify this structure.

2. **Vertical**—structures dedicated solely to family planning and usually parallel to the health care system. This structure allows for donor funds to be allocated entirely to family planning activities. The government programs in Indonesia and China are examples of this structure.

3. **Integrated**—structures combining family planning and primary health care delivery systems. The advantages of this approach are that it conserves funds, avoids duplication, and promotes intersectoral cooperation. Typically, multiple institutions are involved in integrated programs, which are directed by an intersectoral committee.

4. **Linkaged**—structures based on ties between family planning organizations and community and commercial networks. Examples of such structures include acceptors' groups and social marketing programs.

Ickis considers these four types "ideal" in the sense that they represent the best characteristics of family planning organizations. In actuality, such organizations have exhibited a variety of characteristics and employ a combination of approaches.

Ickis (1987:148) states that there are three critical structural issues that many public managers must face:

- "The need for congruence between strategy and structure
- The need to structure network building
- Relationships between the community and the program."

These issues are discussed under the sections covering Strategy Formulation, Interorganizational Networks, and Community Participation.

A. Structural Characteristics According to Developmental Stage

In most cases, programs evolve from a loose, fluid structure to a highly differentiated, complex bureaucracy as they grow and mature. As shown in Tables 1 and 2, organizations in Stage 1, Emergence, tend to have poorly defined roles and responsibilities. Private organizations are usually controlled by an executive director; Board and staff functions are not clearly delineated. Among government agencies, responsibility for family planning is often shared among several agencies or units. The task for both public and private organizations is to clarify roles and responsibilities so that recurrent functions are routinized.

In Stage 2, Growth, the structure tends to be centralized and project-based, and the central task is to develop an effective structure for implementation. For private organizations, this task takes the form of building an influential Board of Directors and further clarifying the responsibilities of individual staff members. For government agencies, this task involves aligning the bureaucratic structure to support broad program strategies.

In Stage 3, Consolidation and Maturity, the structure should reflect the organization's major strategic directions. Private organizations must clearly define the roles of the staff and Board of Directors and adapt the structure to new strategies. Both types of organizations need to develop their staff's capability to adapt to program changes.

Stage 4, Sustainability, implies a flexible, well-developed structure that is congruent with the organization's mission and strategies. Both public and private organizations need to strike a balance between maintaining their time-tested structure and remaining flexible to adapt to new needs.

B. Autonomy

Most observers agree that a separate structure placed near the center of power is most effective in promoting family planning program performance (Finkle and Ness, 1985; Ickis, 1987). Autonomy provides a strong indication of high-level political support, gives the program visibility, ensures a concentrated effort, and serves as a focal point for myriad related activities. Independence from a large bureaucratic structure is also helpful in expediting program activities and permitting a rapid response to changes in the environment. On the other hand, an independent unit is vulnerable to disbandment if funding ends or the political constellation

changes. Interagency coordination and avoidance of duplication may be more difficult for an independent agency.

In Indonesia, the autonomy of BKKBN, the National Family Planning Coordinating Board, was associated with special features that enabled it to expand services rapidly. These features included: permission to receive funds directly from international agencies without undergoing cumbersome approval procedures; ability to import contraceptive supplies in bulk; exemption from normal practices of stocking supplies; and authority to select and hire staff independently and to provide incentive allowances to attract high-quality staff (Paul, 1982).

Clearly, the degree of independence a family planning agency has depends upon the existing government structure, political support for family planning, program goals, and the professional interests and power of key decisionmakers. Being subsumed under a larger structure such as a ministry of health is not necessarily harmful. Maru (1989) points out that the Republic of Korea and Thailand have implemented successful family planning programs within the context of the Ministry of Health, while programs in Kenya and Bangladesh have suffered from the inherent weakness of the health structure. Similarly, Indonesia has been successful with an independent inter-ministerial coordinating structure, while a similar structure in Egypt has been less effective.

Paul (1983) notes that autonomy can be nominal, or a result of position in the structure, or earned, based on external perceptions of an agency's power or effectiveness. Most successful programs either earn additional autonomy or compensate for limits on autonomy by using private agencies or community organizations (Paul 1983).

C. Integration

According to Simmons and Phillips (1987), the debate over integrating family planning programs with health and development has receded since the 1970s, since many countries and international organizations have reached the consensus that specialized population and family planning activities are appropriate, but these activities should be linked with health and development programs. Nevertheless, they note, "basic questions concerning the degree, type or phasing of integration that contribute most effectively and efficiently to policy planning and implementation remain largely unanswered" (Simmons and Phillips, 1987:187).

The major arguments in favor of integration are:

- Providing family planning with other valued services will increase contraceptive acceptance, since clients prefer holistic approaches.
- Family planning is acceptable only if introduced in the context of other services.
- Due to the medical nature of modern contraceptives, qualified health personnel should be involved in service delivery.
- Existing health infrastructures and outreach personnel can be used more efficiently if services are integrated, and this can reduce administrative and service delivery costs for both family planning and other services.

Other arguments reflect theoretical perspectives such as the fact that fertility, mortality, morbidity and socio-economic status are all interrelated or that social systems are integrated units (see Simmons and Phillips, 1987, and Finkle and Ness, 1985, for a fuller discussion).

After reviewing the results of various experimental projects, Finkle and Ness (1985:35) describe the findings "at best inconclusive" in support of integration, while Simmons and Phillips (1987:188) label the empirical evidence as "weak and contradictory." In particular, Simmons and Phillips (1987) found no evidence that integrated services promote higher contraceptive acceptance rates than vertical family planning services. Clients responded well to both integrated and vertical services. Simmons and Phillips (1987:204) concluded that "people desire good services, regardless of their specific combination." Finkle and Ness (1985) point out that contraceptive acceptance did increase in Malaysia and Thailand after family planning was integrated with health services, but this increase was associated with a greater number of supply points, thereby reducing the costs to clients.

In regard to the effectiveness of various service mixes, Simmons and Phillips (1987) found that providing limited contraceptive services without educational efforts, such as in a household distribution program offering one or two methods, is ineffective and also poses ethical problems due to the lack of adequate information, follow-up and access to medical attention. At the other end of the spectrum, providing comprehensive family planning and comprehensive primary health care may not be necessary to promote contraceptive acceptance. Other programs focused on family planning services and education were effective, regardless of the other health services offered.

The argument that health personnel are needed to administer contraceptive methods for safety reasons is not testable, since it hinges on local judgments regarding the relative safety of specific contraceptive methods and maternal mortality and morbidity levels. Other factors include the availability of trained health personnel, client preferences regarding methods, and laws regarding drugs and medical procedures. Nevertheless, one can say that health authorities in most developing countries have determined that non-medical workers can safely provide oral contraceptives. Although paramedics have inserted IUDs and performed sterilization procedures under a physician's supervision in a few countries, this practice remains limited.

In regard to the relative efficiency and economy of integrated services, the available evidence does not support these assertions, since family planning services are typically added on to already overburdened systems. Gillespie (1985) argues that it is counter-intuitive to assume that combining several different and difficult development actions will reduce the level of difficulty; the likely outcome is for some components to be emphasized at the expense of others or for the whole system to be overwhelmed. Simmons and Phillips (1987) point out that in areas where comprehensive health and family planning services are needed, the resources and capability to implement them are often lacking. Therefore, the issue is how to strengthen the organizational capacity of the public sector. Simmons and Phillips (1987) conclude that governments have found it very difficult to implement family planning services on a large scale using the existing bureaucracy. In their view, the most effective approach has been the phased implementation of integrated service components, as illustrated by Indonesia and the Matlab project in Bangladesh. In Indonesia, the vertical family planning program was used to build organizational strength but close links with the health ministry were maintained. When the rural family planning infrastructure was well developed, health components were added as a way of improving health service coverage.

Countries vary in the degree of integration of family planning with health or development activities. Noting the lack of conclusive evidence on the success or failure of integrated programs, Maru (1989) argues that the more important variables in program implementation may be the ability of top managers to orchestrate structure and process to the new tasks and to manage a new environment.

Ickis (1987:150-151) proposes three hypotheses for future research:

- "Where the density of user population is high and the technology being provided is familiar, a low-cost strategy will be most effective when implemented through a vertical structure . . .
- Where the density of the user population is low and the technology is familiar, a low-cost strategy will be most effective when implemented through an integrated structure . . .
- Where either the density of population is low or a technology is unfamiliar, a segmented strategy, that is, a strategy that seeks to use different approaches for different target groups in the population, will be most effective when implemented through a linkaged structure, that is, a structure closely tied in with local institutions."

Thus, a combination of vertical and integrated programs may be most effective.

Integration of program administration is seen as a separate issue from integration of services, since some programs have integrated some elements but not others. Finkle and Ness (1985:35) assert that there is much anecdotal evidence to show that adding oversight of family planning onto existing managerial responsibilities means that "it will not receive sufficient managerial time or attention to produce high performance." Noting the complexity of administering a wide range of disparate services, Finkle and Ness (1985:36) conclude that "a specialized organizational identity provides the optimum structural condition for effective management in family planning." Contrary to the assertion that integration will maximize resource utilization, Simmons and Phillips (1985:199) state that "Integration may threaten established channels of control over scarce resources through adjustments in budgetary, personnel, and logistics systems, thereby weakening rather than enhancing the organizational capacity to implement services."

Simmons and Phillips (1985) note that concerns over allocation of power, resources, professional interests and organizational cultures affect decisions regarding bureaucratic structure within national ministries and that the politicization of the issue is likely to continue. They advocate that future analysis differentiate between approaches that serve the needs of service populations and those associated with the pursuit of vested interests.

D. Interorganizational Networks

Ickis (1987) asserts that national family planning programs are more effective where responsibility for tasks is shared among participating agencies that meet certain conditions:

- Shared competency levels. Participating agencies must have a roughly equivalent competency in order for a rational allocation of tasks. If

competency levels are unequal, the more competent agencies will seek the autonomy needed to achieve results.

- **Goal congruence**. Participating agencies must agree on basic goals. In some countries, strains emerge between agencies whose objective is to improve maternal and child health and those seeking to reduce the population growth rate.

- **Domain consensus**. Participating agencies must agree on which tasks each will perform, although there may be some overlap, particularly in large countries.

- **Network-building capability**. Participating agencies must be able to interact on a continuing basis, which requires mechanisms for mediating the flow of information and determining the decisionmaking process. These mechanisms must be designed and managed with skill.

In sum, coalitions need careful nurturing and constant attention to ensure that they are functioning in a healthy and effective manner.

The benefits of sharing responsibility among several agencies are: better utilization of specialized talents and critical resources, broader constituency-building, improved access to information and varied perspectives, and possibly wider geographic coverage or expansion of services to special groups. Participating agencies can benefit from collaborative efforts by building professional skills, expanding activities and sharing information.

According to Paul (1983), interorganizational cooperation works better through the use of network structures rather than on hierarchical control. The BKKBN of Indonesia is an example of a public family planning agency having strong linkages with the Ministries of Health, Education, Information, Interior, and Religion. The BKKBN provincial and district-level officials work closely with their counterparts in cooperating ministries. While BKKBN has no direct control over the collaborating agencies, it does control the funds provided to both public and private agencies for family planning activities as well as contraceptive supplies distributed through clinics (Paul, 1982).

Many examples exist of the complementary roles of public and private family planning agencies. Typically, the public agency takes on increasing responsibility for service delivery while the private agency concentrates on more specialized tasks such as testing of new programs, mass media campaigns, training and research. The Jordan family planning program typifies this dichotomy; because the government MCH/FP division feels unable to undertake communication activities due to political and cultural sensitivities, the Jordan Family Planning and Protection Association is giving priority to this area (Abu Atta, 1989).

E. Level of Decisionmaking

Ness (1989) proposes that managers create strategic management cells consisting of the manager and subordinate managers directly responsible to him/her. The subordinate managers in turn could organize cells with their subordinates and so on to create a series of

linked cells from the top down to the field level. Ness (1989) suggests that each cell undertake a planning process to address seven key ar as:

1. **Goal Identification**—each cell should identify specific goals such as the number of clients served, people trained, educational materials produced or supplies to be made available.
2. **Monitoring**—each cell should create a monitoring system that will tell the manager how well the unit is functioning and why interventions are working or not working.
3. **Resource Availability**—the cell should ascertain what funds, staff, equipment and facilities it has now and what level will be required to meet an increase in output or coverage.
4. **Environmental Factors**—the cell should analyze conditions in the resource, distributive or client environment that could be used to improve performance.
5. **Contraceptive Technology**—the cell should ask what contraceptive methods are being used and how the full range could be used more effectively.
6. **Internal Structure**—the cell should analyze its own structure to determine whether people are encouraged to pay attention to their work or are distracted by low priority tasks.
7. **Management Styles**—the cell should examine managerial styles and practices such as personnel management, establishment of routine procedures, and reporting requirements to ensure that they are congruent with organizational priorities.

This review process involves managers at every level in program planning and promotes a decentralized decisionmaking process.

Such a process is well suited to large, complex organizations, especially those covering a large geographic area. Satia (1987) asserts that in a heterogenous, uncertain environment, a great deal of initiative is required from staff and therefore the organizational structure must be decentralized to facilitate more responsive planning. A decentralized system allows for greater community participation and more flexibility in responding to local conditions. The major drawback is that central managers lose control and the ability to impose highly detailed standards of performance.

VII. Information Systems

Management information systems (MIS) are a valuable management tool that can provide regular and timely information on program inputs and performance, costs, personnel, distribution of supplies, and facilities. Such information enables managers to make decisions regarding staffing and resource allocations, to assess the effectiveness of specific approaches and subunits, and to predict and control costs. Thus, managers can adjust program inputs and outputs to achieve program goals and can select the most cost-effective program activities. Often, MIS findings enable managers to spot problems and correct them promptly. Information systems can also be used to provide feedback to workers at all levels regarding their work and their outputs relative to others.

A. Characteristics of Systems According to Developmental Stage

As shown in Tables 1 and 2, newly established organizations in Stage 1, Emergence, have poorly developed internal systems which are inadequate for informed decisionmaking. At a minimum, these agencies must meet their donor's requirements and provide contraceptive supplies in a timely fashion.

In Stage 2, Growth, internal systems are still inadequate for decisionmaking. Private organizations need to develop personnel, financial and logistics systems to support their expanded programs. Government agencies may have these systems in place, but typically they are not well developed and are underutilized by staff and managers.

In Stage 3, Consolidation and Maturity, the basic systems for effective functioning and decisionmaking are in place. Both public and private organizations face the task of improving systems for monitoring, controlling, and evaluating for efficiency and effectiveness.

In Stage 4, Sustainability, organizations use their management systems to support their changing roles, and the critical task is to use the information produced to support innovation and change.

B. Program Monitoring

Based on his in-depth analysis of successful development programs, Paul concluded that these programs demonstrated that "simple, but effective information systems could be devised and made to work as an aid to the monitoring process if the top management is motivated to use it." (Paul, 1983:83) According to Paul (1982), monitoring processes differ in relation to three characteristics:

- Degree of complexity in information;
- Speed of feedback; and
- Mix of formal and informal sources of data gathering.

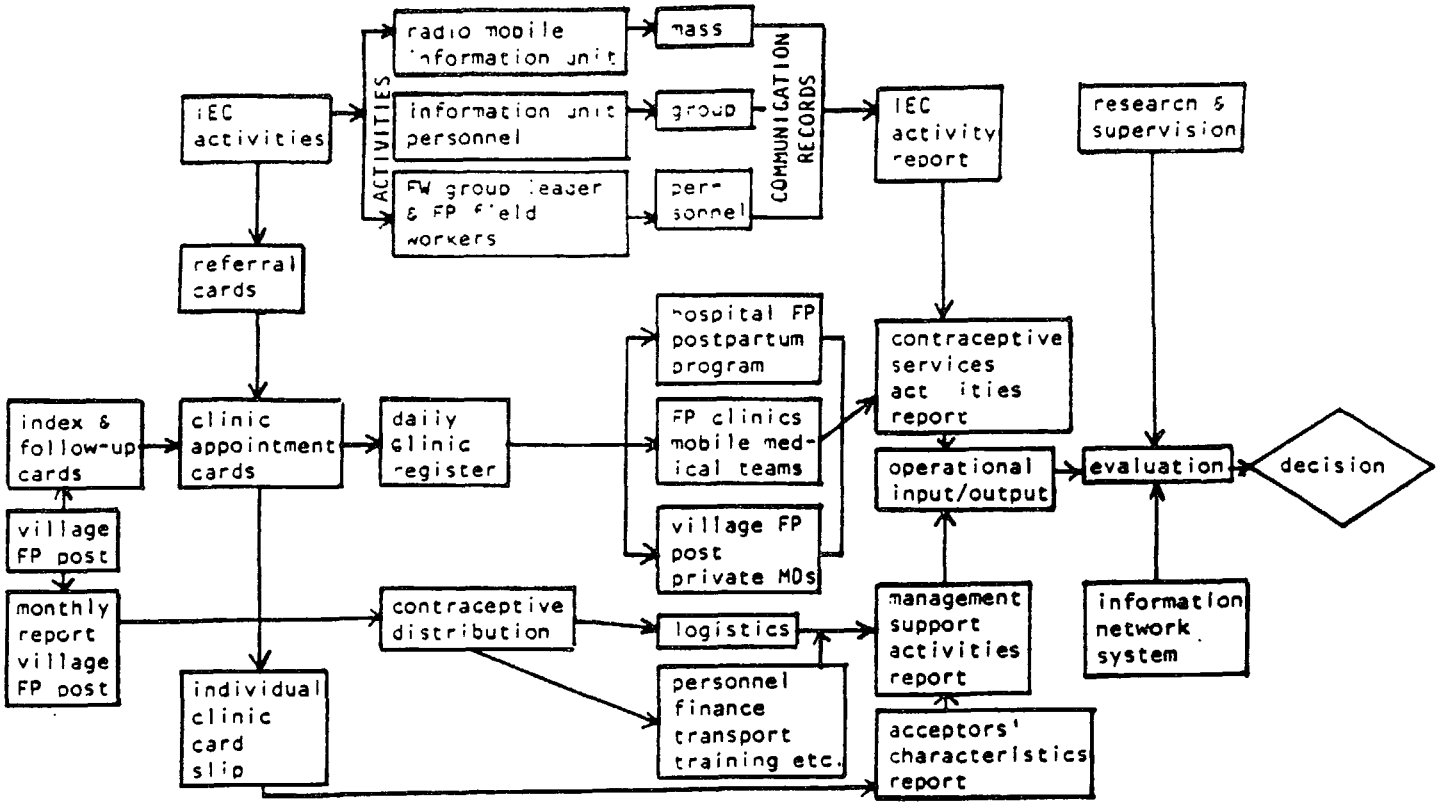
Successful programs tend to have a streamlined system with a limited number of indicators. Reports from the districts are processed quickly and the results disseminated without delay at all levels in the system. In addition to formal data sources such as reports, spot checks, discussions with staff and program beneficiaries and other informal sources are used to collect information (Paul, 1982).

Fast feedback is important in order to respond to changing conditions. Paul (1983) reports that some countries have computerized systems which enable them to send feedback to the districts within two weeks of receipt of original data.

Indonesia's family planning program is known for its highly efficient but simple information system. Each clinic provides a monthly report including information on new acceptors by method used, types of services provided, and stocks of supplies. These reports are sent to BKKBN headquarters by mail (usually within 12 days after the end of the month) and processed within a few days. Within one month, each administrative level is given feedback on the trends identified from the data analysis, including subordinate units ranked by performance and classified by the indicators from the monthly clinic reports. This system enables local

officials to compare their district's progress with that of others and to negotiate for additional resources and assistance. To ensure accuracy, field visits and cross checks by senior officials are made. Also, clinic reports are checked against the tear-off sections of clinic records, which are also sent to headquarters monthly (Paul, 1982). Figure 2 shows how information from all parts of the BKKBN system contributes to informed decisionmaking at appropriate levels.

Figure 2. Reporting System of BKKBN, Indonesia



Source: Jain, Sagar C.; Kanagaratnam, K., and Paul, John E. (eds.) *Management Development in Population Programs.* Chapel Hill, N.C.: University of North Carolina at Chapel Hill, 1981, p. 71.

The experience of Profamilia in Colombia illustrates the importance of streamlining. In about 1980 Profamilia leaders decided that the information systems were generating too much information, most of which was not useful to managers. The information collected was reduced to only those elements considered essential for decisionmaking—the unit cost per couple-year-of-protection, by method use, by clinic and by program. The logistics system, which previously collected detailed personal information about users, was changed to record contraceptive sales information only by brand and site. The previous system was not only complicated and time-

consuming to maintain, but also may have hindered sales because some clients preferred to pay higher prices for pharmacy products rather than answer Profamilia's highly personal questions. After the system changed, reports and financial statements were completed 20 days after the monthly closing date. In addition to providing managers with more timely, useful and accurate information, the new system allowed staff to concentrate on their work rather than on recordkeeping, freed up storage space, and may have contributed to an increase in contraceptive sales (Tamayo, 1989).

Two examples from India show the need to integrate information systems into the larger management process. In Uttar Pradesh State, a monitoring system was introduced to identify the reasons for wide variations in output among primary health centers in rural areas. Despite considerable training, only two of the six district officers used the new system, while the others ignored it. Reasons for not using the system included: district officers did not need the system to tell them where problems existed, but they were unable to take corrective action due to financial constraints, procedural delays and political interference; state-level officials did not take the system seriously; and the district officers were more interested in achieving family planning targets than in promoting efficiency. A similar system introduced in Maharashtra State was used in program monitoring and decisionmaking due to several factors: senior officials were involved in its development; data from the system were used in decisions on promotions, transfer and other rewards; and health officers believed that the evaluation based on the MIS would be objective and fair. The MIS findings were used in monthly review meetings attended by state and regional directors. Thus, despite the fact that performance figures were inflated and the paperwork was excessive, the MIS was successful as a management tool (Murthy, 1989).

C. Present Levels of Information Systems

Keller et al. (1989) state that a significant obstacle to effective management in many family planning programs is the lack of sufficient and accurate information on the flow of supplies, on personnel and training, and on service statistics. "[M]any program managers remain hampered by the absence of accurate and timely information, and their decision-making takes place in a vacuum," they assert (Keller et al., 1989:131).

A diagnosis of management information systems (MIS) in government MCH/FP programs in 27 African, five Asian and eight Latin American countries found that "many countries do not produce certain basic input and output indicators and that even among those that do, information is too infrequently brought to bear on management decision making." (United Nations Population Fund (UNFPA), 1990b:1). The input indicators examined included physical infrastructure, personnel, training, finances, equipment and logistics. Output indicators included numbers of recipients of various MCH/FP services, coverage rates, efficiency, program quality/image, and program impact.

The UNFPA study documented the lack of basic information on program inputs. Of the 40 countries studied, four have no routine information on which service points provide each type of contraceptive method. In an additional nine countries, information is not available at all levels at which it would be useful. For example, national-level information is useless to provincial and district managers concerned with programs in a specific area. Reliability and timeliness of the information is also a problem for several additional countries.

In regard to outputs, the UNFPA study found serious shortcomings. Thirteen of the 40 country programs studied do not monitor the number of current users of contraceptive methods. Of the 27 countries that have such information, 11 countries have contraceptive use estimates for only a few program levels, and in 13 countries the data are considered unreliable and/or untimely (United Nations Population Fund, 1990b). In 25 countries, programs do not measure coverage—the proportion of couples protected against unwanted pregnancy.

Little information is available to managers to assess program quality or impact. In most countries, information, education and communication activities are not monitored and hence managers have no feedback on which to base program improvements. Fewer than half of the 40 countries conduct follow-up studies of users to determine their degree of satisfaction. Most countries do not routinely collect information on whether personnel acquire new knowledge from training or whether program norms regarding fieldworker visits, supervisor contacts, and clinical procedures are adhered to (United Nations Population Fund, 1990b).

On the other hand, many countries collect unnecessary information or have overly cumbersome systems that drain staff time. The UNFPA study identified 14 countries as including information of little practical value in recording/reporting systems. In half of the 40 countries studied, the recording and reporting forms and processing procedures were deemed repetitive or duplicative and thus made unnecessary demands on staff time. Yet most countries report a shortage of personnel needed to conduct essential data gathering, processing and analysis. For most countries, this shortage is found at the national level but is even more acute at the provincial and district levels. Many of the existing personnel are not adequately trained for MIS responsibilities (United Nations Population Fund, 1990b).

The excessive information collected in some family planning programs may stem from a lack of understanding of possible data sources and failure to use other research tools. For example, detailed information on user characteristics could be obtained for a sample of users (such as every fifth client) or by exit interviews (such as a sample of clients during a one-week period). Other information such as source of referral, use of other service sites, attitudes regarding family planning, and views on the quality of services provided could be collected by intercept studies, household surveys or focus group discussions, depending upon factors such as the need for a representative sample, the degree of accuracy desired, and the usefulness of qualitative, in-depth information. Using a variety of research techniques not only provides more useful information but also allows clinic and outreach staff to focus on serving clients while trained researchers generate information needed by program managers.

Another serious problem identified by the UNFPA study is that, even when information is available, it is often not used in making management decisions at any program level. When the information is used, it is mainly at the central level, and indicators may not be used for multiple purposes. For example, low numbers of prenatal visits may result in selective supervision but may not be used in decisions on resource allocation. Similarly, input and output data are rarely used together in decisionmaking. For example, the number of service points in relation to the total coverage of an area may not be considered. As a result, "decisions are generally based on an analysis of only part of the situation, and duplication of efforts occasionally results" (United Nations Population Fund, 1990b:15).

D. Operations Research

Operations research (OR) is "the application of analytical techniques in a continuing process to improve field operations." (Gallen and Rinehart, 1986:J-814) It encompasses pilot projects to demonstrate new approaches, experimental efforts to test different activities, and evaluation of ongoing programs. In family planning, operations research provides practical ways to improve program management and service delivery.

To date, operations research has focused mainly on community-based distribution of contraceptives, integration of family planning and other primary health care services, and cost-effective approaches. Other topics covered include alternative delivery systems, choice of methods, community workers, training and supervision, communication, community participation, and fees (Gallen and Rinehart, 1986).

Finkle and Ness (1985) advocate wider application of operations research to solve management problems in family planning programs, rather than relying on survey research. "More deliberate use of OR can improve management by the simple fact that it forces, induces, or permits managers to pay attention to their own organizations, to look for problems in their organization and not simply in the intractibility of their potential clients," they state (Finkle and Ness, 1985:50). In contrast to surveys, OR attempts to identify problems and seek solutions. While surveys tend to focus on the client and the larger community, OR projects seek to understand the underlying factors that make a program effective or ineffective and to determine which of several program choices is best in terms of cost-effectiveness or other criteria.

Because research and evaluation staff are typically trained in survey techniques, specialized training and other inputs may be needed to make greater use of OR. Finkle and Ness (1985) recommend that managers give OR a distinct organizational setting within research and evaluation units.

Gallen and Rinehart (1986:J-814) state that OR findings are most likely to be utilized when:

1. "The service delivery program is already functioning and innovations can be introduced gradually;
2. Program managers are closely involved in identifying the problems to be addressed and carrying out the research; and
3. Specific plans are developed from the start to make it easier to utilize the findings, including, for example, any financial or technical support needed to help expand a pilot project into a large-scale activity."

Thus, OR requires the active participation of managers at all stages of the research and analysis.

The value of operations research is illustrated in a study made in northeast Brazil by Foreit and Foreit (1984), who found that having supervisors visit community-based distributors quarterly rather than monthly had no effect on program performance, as measured by new acceptors, revisits and distributor performance, but did represent substantial potential savings in supervisors' salaries and travel costs.

Morton (1989) describes the problems resulting from an expansion of services before the results of the experimental intervention were assessed. Rapid expansion shortened the learning process for the implementing agency and left many issues unresolved, including criteria for worker selection, the nature of the workers' roles, messages to be conveyed by workers, and worker compensation. While illustrating the value of OR in decisionmaking, this example also underscores the importance of timely data collection and analysis.

Donor agencies are making increased efforts to disseminate findings from operations research projects. Major reviews of OR findings include Cuca and Pierce (1977), Gallen and Rinehart (1986), Ross, Rich and Molzan (1989), and Wawer et al. (1985).

E. Patient Flow Analysis

One diagnostic tool which could be more widely used in family planning programs is Patient Flow Analysis (PFA), which is a system of data collection and computer modeling that documents personnel utilization and patient flow in health clinics. PFA graphically represents a clinic session and can be used to identify problems in patient flow, determine personnel and space needs, and estimate personnel costs per patient visit. A simulation model can be applied to current clinic operations to determine the effects of changes in staff time, patient load and the appointment system. The model can also be used to create hypothetical clinics or show the effects of major changes in clinic operations such as adding a new service or integrating services. Anticipated benefits of using PFA include a reduction of client waiting time, more equitable distribution of workload among staff members, and reduction of personnel costs. Also, additional clients may be served for the same or reduced costs. PFA can be run on a microcomputer. Substantial training is needed in order to interpret the results correctly (U.S Department of Health and Human Services, [no date]).

Results from patient flow analyses in family planning programs have been impressive. For example, in Costa Rica average waiting time decreased by 65 minutes per client, and the time that staff spent in contact with clients increased by 26 percent among the 20 clinics which made operational changes as a result of the analysis (Hudgins and Merino, 1988). In Botswana, PFA was used to assess an experimental change in service delivery from specific days devoted to family planning to a fully integrated system providing all health services on a "first-come, first-served" basis. The PFA found that client waiting times were shorter and staff time utilization was as efficient or more efficient in the experimental integrated services compared with the family planning-only services (Graves and Blair, 1985).

VIII. Human Resources

Developing an adequate personnel base is considered to be a major factor in the success of family planning programs. As Keller et al. (1989:130) state: "It is vital to attract and retain competent and motivated service and managerial personnel at all levels of the program." Paul (1983) identified staff selection, training and creation of commitment to be key factors in program performance; these three factors are discussed in more detail in the sections that follow.

A. Staff Selection

While managers often understand the value of having competent and motivated staff, many family planning programs lack a strong staff due to several factors:

- **Competition from other sectors.** The best available talent may be assigned to other government sectors which are given higher priority or considered more prestigious (Keller et al., 1989).

- **Low salaries.** Both public and private agencies typically pay lower salaries than the private, for-profit sector (Keller et al., 1989).

- **Shortage of trained workers.** In some areas, trained workers may be scarce (Keller et al., 1989).

- **Biased hiring practices.** In government programs, hiring decisions may be based on political and personal affiliations or hierarchical position rather than on competence (Paul, 1982). Governmental agencies may be expected to absorb people who are part of the system but are not currently assigned to a job. Cultural factors which affect hiring practices include the strong tradition of helping family members and the status and power entailed with giving a job to someone when jobs are scarce (Bertrand, 1990).

- **Low morale.** In government programs, many staff may be arbitrarily assigned to family planning from other health units and may have a negative attitude toward their work because they were not given a choice of assignments (Herm, 1987). However, Herm (1987) notes, even those staff members who are drawn into social service work out of altruism may have low performance because they become stifled by the bureaucratic environment and molded into relatively uniform job behavior.

Clearly, flexibility in hiring, competitive salaries, and working conditions that support individual strengths are major influences in staff recruitment and retention.

Recruiting skilled staff may be especially difficult because of the specialized training and skills involved. According to Keller et al. (1989), it is often difficult to attract and retain upper and middle management and clinical-level medical and paramedical personnel. Because of the shortage and expense of physicians, some programs have delegated authority for some tasks to nurses and trained paramedics. For example, in Thailand and Turkey, paramedics prescribe most contraceptive methods, insert IUDs, and provide follow-up care to users (Keller et al., 1989).

Establishing community outreach programs is also difficult, especially when funding is limited. Keller et al. (1989) cite examples of programs that have been hindered because of selection of inappropriate personnel. For example, in societies where women are reluctant to be examined by or discuss intimate matters with men, male workers may be ineffective in promoting female methods. Urban residents, young people, or political appointees may have little in common with the people they are assigned to educate. According to Keller et al. (1989:130), "the most effective agents have proved to be those with a background similar to the potential clients, but with some claim to expertise through training and personal experience (typically, married women who have children and who use contraceptives themselves)."

Often, the most skilled staff members are found in agencies working in related areas such as the family planning association, health agencies and other social service organizations. Paul (1982) found that successful development programs used pilot projects to identify and develop key personnel.

Flexibility in hiring is one of the major prerogatives managers need in order to build a strong staff. In Indonesia, BKKBN was able to hire high-caliber staff due to special privileges. Normally, the BKKBN would have had to recruit staff through its parent ministry, the President's Office. However, the BKKBN chairman was allowed to appoint staff without additional approvals. Also, although the government salary scales applied to BKKBN, special incentive allowances were permitted in order to attract well-qualified applicants (Paul, 1982). These special privileges reflect the high-level political support accorded to BKKBN.

B. Staff Motivation and Incentives

"Cultures vary considerably in what values motivate people to give themselves fully to their work, thus it is difficult to specify what conditions in an organization will best mobilize human resources," states Ness (1988:6). In general, he believes, "people respond well to a system that is fair, in which they can see that rewards are given for performance and not for privilege, and perhaps most important, that the boss takes a personal interest in them and is willing to hear and to understand their problems." (Ness, 1988:6)

According to Herm (1987), staff members are motivated by their perception of the relative risk, effort and reward associated with their work. Risk is usually associated with uncertainty regarding possible outcomes. Risks can include fatigue, frustration, threats to one's well-being, deprivation or punishment. Effort denotes the amount of energy or time expended on performing a task and is affected by the person's ability to do the task. Rewards are outcomes valued by the worker, including self-fulfillment, praise, and other benefits given by others.

Following are some of the major rewards or benefits discussed in the literature as ways of promoting high job performance:

- **Merit-based promotions.** Promoting staff on the basis of competence rather than seniority or other factors gives staff an incentive to work harder. Also, providing opportunities for career advancement can help to retain high-caliber staff. In Maharashtra State, India, the decision by the Secretary of Health to fill newly created supervisory positions with the best-qualified staff contributed to the revitalization of the state family planning program (Murthy, 1989).

- **Status enhancers.** Paul (1982) found that successful programs used non-economic incentives such as recognition, status and commitment to a cause to reward high performers. He describes various incentives given by BKKBN of Indonesia to outstanding staff: trips to the capital, observational tours of successful programs in other areas, awards to fieldworkers and volunteers given by the President, and additional program funds to successful program managers.

- **Autonomy.** Providing staff with greater autonomy and support for their decisions can give them a greater sense of control over their work and foster innovation. In Indonesia, BKKBN gave successful program managers autonomy to experiment with new ideas

and enjoined supervisors to respond quickly to their proposals (Paul, 1982). In Maharashtra State, India, high-level officers were directed not to interfere with the decisions taken by lower-level supervisors in order to encourage decisionmaking at lower levels (Murthy, 1989).

- **Training.** Keller et al. (1989) state that poor motivation and lack of a service orientation have been improved in some cases by in-service and basic training. They suggest that training can improve employees' understanding of the health justifications for family planning, although they concede that the supporting evidence is limited. Finkle and Ness (1985) cite studies in India and Ecuador which found that training managers and their staff in participative management resulted in higher program performance.

- **Salary increases or supplements.** If poor morale is due to low salaries, Keller et al. (1989) suggest that salary increments should improve morale, although they note that there is little evidence to support this assertion. In regard to salary supplements, Keller et al. (1989) point out that in some cases they have led to increased productivity, but they have also resulted in staff refusing to continue services if the payments are reduced or eliminated. Also, other workers may demand similar payments, which the system may be unable to pay.

- **Incentives.** Incentives, or special payments to providers for specific outputs, entail the same problems as salary supplements. In addition, if payments are linked with the provision of specific contraceptive methods, the provider may try to influence clients to accept a better-paid method, thereby compromising the client's choice of methods (Keller et al., 1989).

In regard to incentive payments, Seidman and Horn (1989b) note that special project payments reduce the likelihood of replication or continuation and leave the impression that the project will end when the payments stop. On the other hand, incentive payments can improve staff retention rates, thereby saving costs associated with recruiting and training new workers and building an experienced work force. A study in Bolivia found that paying promoters in the peasants' union raised their productivity and prevented them from dropping out, which enabled them to build up a steady clientele (Population Council, 1989).

The Training and Visit (T&V) system of agricultural extension replaces financial incentives (derived from illicit payments) with non-monetary rewards such as satisfaction, prestige and respect. T&V, based on regular meetings between the extension agent and the same group of clients, has been well-received by both workers and managers and is generally regarded as a effective outreach method (Heaver, 1984). While providing "a carefully planned mixture of prestige, professional and personal support and accountability," T&V forces workers to devote all their time to education and therefore takes them away from activities such as provision of credit which are sources of kickbacks (Heaver, 1988:49).

In addition to the rewards listed above, it is important to mention the main aversive stimulus which can affect job behavior—fear of being fired. In Colombia, Profamilia staff are given a three-month probation period before the hiring process is finalized. Staff who fail to meet performance standards are discharged (Roper, 1987). The freedom to fire and promote staff is an important factor in Profamilia's ability to retain dedicated, competent employees (Tamayo, 1989). Many government programs cannot discharge staff, except by following extensive regulations, and therefore employees know that a low level of performance is unlikely to jeopardize their job security.

C. Training and Supervision

While most managers consider training to be an important tool in staff development, there are surprisingly few systematic studies that demonstrate that training can improve program performance. The few studies that exist yield mixed results: studies in Bangladesh, Ecuador and Ghana provide some evidence that training of field workers and field supervisors does help to improve performance, while one study in India found that a training program did not improve performance (Finkle and Ness, 1985). Based on their review of the literature, Finkle and Ness (1985:98) comment:

> From all of this we gain a strong sense that training does work, that it should be sustained and repeated and that its content should be designed from a thorough knowledge of the existing situation. . . . There are few hard and fast rules about what works. Good training is adapted to the given situation. What works is contingent upon the setting and the task.

In sum, the available research has little generalizability to different settings. Program managers need to incorporate evaluation mechanisms into their training activities and build on the accumulated knowledge in their local setting.

Family planning organizations in all stages of development have an ongoing need for training in order to orient new staff, improve the knowledge and skills of current staff, and update staff on new developments in the field as well as new policies and procedures. Few universities and other educational institutions offer the specialized training that family planning workers need. For example, most medical and paramedical schools cover family planning and related topics inadequately, if at all, thereby necessitating in-service training for family planning service providers (Keller et al., 1989).

It is increasingly recognized that training should be given to not only service providers but also administrators, financial managers, logistics officers, community-based distributors, communication specialists, promoters, and other staff and volunteers. The practice of shortening and simplifying the training curriculum for doctors and then using it for other health workers has not entirely vanished, although there is growing recognition of the need to tailor training curricula to the tasks of specific workers (Lyons and Schmidt, 1987). In addition to technical information, training courses should cover management skills, Lyons and Schmidt (1987:230) assert:

> . . . attention only to technical skills is not sufficient to meet the needs of the service system. Equal, if not more attention, must be directed to increasing the program's ability to mobilize and utilize available human resources effectively. As the use of family planning reflects not only technical know-how but also attitudinal changes, so too the health workers' training must include a balance of knowledge, skill training, and attitude exploration and development.

Even high-level staff such as physicians need more than the basic facts and techniques, as illustrated by two studies from India cited by Finkle and Ness (1985). These studies found that the clinical and curative orientation of medical doctors undermined their ability to address managerial problems. When their training was changed to include a greater emphasis on community health, the physicians were more open to the managerial perspective.

Simmons (1987:256) lists some of the lessons learned in management training in family planning:

- "Teaching materials must be derived from the experience of actual programs and must be specific to the organizational level and setting within which trainees work."
- Supervisory training must meet supervisors' needs, based on a job and task analysis of all positions.
- Repeated training is needed.
- Training institutions should be involved in consulting and research activities in programs sending personnel for training.
- Management training is usually more acceptable if it is not labelled or perceived as management training.
- "Successful projects should be used for staff development" (Simmons, 1987:256).

Noting the dearth of studies on the impact evaluation of training, Simmons (1987) stresses the need for more research in this area.

In regard to training methods, trainers need to be exposed to adult education concepts and techniques and need to adapt techniques to the trainees' work environment and cultural setting. For example, a course stressing participatory decisionmaking should use techniques involving active class participation rather than didactic lectures. Also, training courses need to take into account the time and resource constraints of family planning workers. Many countries lack training materials; self-instructional materials, low-cost audio-visual media, and distance learning systems are especially needed (Lyons and Schmidt, 1987).

Little information is available on such questions as to the merits of training on site or away, or training service delivery teams rather than staff with similar functions, such as nurses or field workers. Answers to these questions may depend on the type of worker, access to transportation, costs, and agency policies and practices.

Recent studies, mostly in Latin America, have demonstrated that on-the-job training of field workers and community-based distribution (CBD) workers by their supervisors can be more effective than refresher training courses. These research findings include:

- In Ecuador, a study found dramatic differences in the costs of training CBD workers, according to the training venue—centralized (US$114 per worker), provincial (US$58), and individualized training provided by supervisors (US$17)—but no significant differences in the workers' productivity in the six months following training. Nevertheless, CBD workers who received centralized and provincial training had a higher level of family planning knowledge after six months, and supervisors and clients rated the quality of services among centrally trained workers most highly (Hopstock et al., 1990).

- In Guatemala, a study concluded that on-the-job training was more effective and less costly than formal courses, although the researchers recommend that courses be used to maintain field worker motivation and develop skills (Population Council, 1989).

- In the Dominican Republic, a system in which supervisors' visits to promoters varied with the promoter's performance was found to be more effective than refresher training for all promoters; contraceptive use, promotional and follow-up visits, and referrals increased under the supervision system (Population Council, 1989).

- In Peru, CBD workers who received immediate on-site retraining following initial group training had higher knowledge levels than those who had initial group training and a refresher course; in addition, the on-site training took less time and was less costly (Population Council, 1989).

For on-site training of field workers, the supervisors themselves must be well-trained, and each supervisor should be in charge of no more than 10-12 distributors (Population Council, 1989).

The use of supervisors for on-the-job training blurs the distinction between training and supervision but is consonant with the idea of supervisory visits being used for problem-solving rather than routine checking of paperwork and compliance with requirements (Simmons, 1987).

Keller et al. (1989:132) list some of the major problems associated with training:

> Too often . . . greater attention is given to the quality of central-level training than to provincial or district-level training. Key individuals may be sent outside the country for training, with the attendant risk that their current activities will be disrupted and that they may not return. Training may also not be synchronized with the availability of positions, so that trainees may find their newly acquired skills diminished or lost through a lack of opportunity to use them.
>
> Another chronic problem in many programs is the difficulty in convincing senior officials to allow lower level staff to leave their posts to attend training sessions, particularly where medical or paramedical staff are in short supply. . . . Whether for reasons of time or budget, many programs opt for courses that are too short to permit adequate transfer of requisite skills and knowledge and overload attendees with general material, some of which is extraneous to their actual responsibilities.

Solutions to these problems include: strengthening medical and paramedical curricula in family planning, basing training on service norms and job descriptions for personnel at all levels, allowing sufficient training time, concentrating on those most in need of training, conducting research on the content and duration of training, providing overseas training selectively, and using self-instructional techniques (Keller et al., 1989).

Despite the very great need for training in most family planning programs, it should be emphasized that training is not a panacea for all organizational problems, such as poor quality of services, low outputs, high staff turnover, and lack of coordination. Training is a tool that can be used in conjunction with other management techniques to bring about desired change but it is not a substitute for other necessary actions.

D. Commitment

Studies in Malaysia, Philippines and Singapore have found that the staff's attitude toward the family planning program significantly affects clinic performance (Herm, 1987). The Singapore study found that staff with more favorable attitudes were more productive and that "motivational forces were the most significant variable" (Herm, 1987:286).

Profamilia of Colombia recognizes the importance of motivation and stresses the agency's mission, to promote the human right to family planning, in staff recruitment, training and supervision. Thus, the altruistic motivation that stimulates people to join the organization is reinforced. "Most workers seem to have almost a 'missionary view' of their job," Tamayo (1989) remarks. High demands are made on the staff, and those who are not sufficiently committed are discharged (Roper, 1987).

Likewise, Paul (1983) found that successful government agencies make an effort to ensure the commitment of staff brought in from other ministries. In Indonesia, government employees joining BKKBN are asked to sever their links with their parent departments and are given intensive training in BKKBN's own training schools (Paul, 1983).

IX. Effective Supply Systems and Logistics

Ensuring adequate supplies of contraceptives and other necessary materials is crucial to the success of any family planning program. "Regardless of how successful a program has been in generating demand, it will lack impact if it cannot maintain a continuous supply line," state Keller et al. (1989:131). Despite its central importance, logistics management has received relatively little attention by family planning managers. This situation is changing, due to increased demand for condoms for AIDS prevention, projected contraceptive shortages, and concern about the deterioration of condoms in storage.

A. Logistics Management

Although little research has been done on the consequences of contraceptive shortages, anecdotal reports indicate that a sizeable number of contraceptive users drop out altogether or use ineffective methods and thus become pregnant. When service providers are not assured a reliable supply of contraceptives, they become demoralized and alienated from the program. Adequate contraceptive supplies at all levels in the system also avoid the "cookie jar phenomenon" (characteristic of children who hesitate to take some cookies when the jar is nearly empty), whereby officials at the central level withhold stocks from the provinces for fear of running out altogether (Paul, 1982:70).

In addition to shortages, some countries also experience overstocks of contraceptives that cannot be used (such as IUDs in outlets without personnel trained in insertion), a surplus of several years' worth of supplies, or items that are unusable due to improper storage or age. Such wasteful practices are costly and avoidable through use of appropriate logistics management systems.

An analysis of the logistics systems in 18 sub-Saharan African countries found that "the most serious obstacles to logistics system functioning were procedural—forecasting,

establishment of maximum/minimum values, development and use of logistics information systems, etc.—rather than shortages of vehicles and warehouses." (United Nations Population Fund, 1990a:i). Fifteen of the 18 countries were found to have frequent shortages or stockouts of contraceptives at the service point level. Nevertheless, about half of the countries had over-supplies of some methods. The majority of countries did not use appropriate forecasting procedures and lacked even a rudimentary logistics information system to track inventories, pending orders and requisitions.

Keller et al. (1989:131) enumerate some of the causes of poor logistics systems: "financial constraints on purchasing, inadequate inventory information and requisition systems, ill-defined procedures for buying and shipping, inefficient warehousing practices, lack of transportation and pilferage." Possible solutions to these problems include local production of equipment and supplies, better stock information systems, and improved ordering and warehousing procedures. In some countries, responsibility for providing supplies to government service outlets has been delegated to private organizations such as family planning organizations or companies which distribute over-the-counter medicines or soft drinks (Keller et al., 1989).

Graves et al. (1987:337) summarize the major lessons learned in logistics management:

- Without training and supervision, employees cannot run a logistics system efficiently.
- Careful record keeping is a must for alleviating supply imbalances.
- A 'first-in, first-out' system of issuance is essential for ensuring that contraceptives will be disbursed from warehouses and outlets in the order in which they were purchased or received.
- When clinic- and district-level employees are inexperienced at maintaining appropriate supply levels, an allocation system in which goods are 'pushed' from a central warehouse to clinics is appropriate; otherwise, trained employees should requisition supplies (a 'pull' system), based on forecasted requirements.

Additional research is needed to address issues such as training strategies, supervision systems, use of parallel systems versus a single integrated system, and appropriate levels of inputs.

For most family planning programs, the components of the logistics system—sources of supply, warehouses, distribution points and logistics procedures—are already in place. Hence, the task facing most managers is to improve the efficiency of existing systems, not to develop new ones. The goal should be to make contraceptives continuously available at all program levels.

In making logistics systems more efficient, managers must understand that there is a tradeoff between service to consumers and distribution costs. "Maximum service requires large inventories, premium transportation, and many warehouses—all of which raise distribution costs," state the logistics guidelines developed by the staff of John Snow Inc. (1990b:7).

In countries with low levels of contraceptive prevalence, family planning leaders may assume that an orderly, comprehensive logistics management system is not needed. Logistics management specialists reject this idea, arguing that it is easier to introduce such a system in the

early stages of a program and build on it as the program expands than to attempt to straighten out a haphazard, poorly developed system. Furthermore, a weak logistics system will hamper program growth and may have many hidden costs such as inefficient use of transportation and staff time, wasted commodities, low staff morale, and loss of clients.

B. Logistics Information Systems

An analysis of management information systems in 40 developing countries concluded, "The state of underdevelopment of logistics information systems in all regions except Asia is striking and . . . is no doubt a contributing factor toward often documented shortages of contraceptives at service points. Total unavailability of such data plagues almost half of the countries examined." (United Nations Population Fund, 1990b:8) The lack of sub-national data hinders distribution of supplies, while the lack of regular reports on supplies to the national level impedes forecasting and ordering.

To aid in logistics management, a ready-made computer program known as Contraceptive Commodities Management Information System (CCMIS) has been developed by the U.S. Centers for Disease Control. The CCMIS tracks inventory levels, product availability and distribution amounts through the program. It can be adapted for any number of products, including clinic supplies and educational materials, and can accommodate various organizational structures. The CCMIS can run on a microcomputer, is currently available in English and Spanish and has been used in Costa Rica, Guatemala, Kenya and Thailand (Graves, 1990; U.S. Department of Health and Human Services, 1989).

C. Logistics Training

Managers of family planning programs have often regarded logistics work as low-status and have given little attention to the development of staff capabilities in this area. In all but the most advanced countries, logistics staff could benefit from specialized and on-the-job training.

An analysis of the logistics systems in 18 sub-Saharan African countries found that staff in a majority of countries need training in overall management logistics, logistic information systems, forecasting, and warehouse procedures (United Nations Population Fund, 1989a) Most countries have more than 10 staff members needing such training, including central, provincial and service point staff.

Several detailed handbooks are available to guide managers and logistics staff in improving logistics management: John Snow Inc., 1990a and 1990b; U.S. Department of Health and Human Services, 1985; and World Health Organization, 1990.

X. Leadership as an Essential Factor

The available evidence indicating the importance of leadership in family planning programs comes mainly from case studies. Ickis (1987) describes five patterns of leadership:

1. **Inspirational**—capable of mobilizing enthusiasm and action among others, as exemplified by Dr. Arturo Cabezas, who introduced vasectomy in Costa Rica in the mid-1960s.

2. **Entrepreneurial**—promoting a spirit of innovation and imperative for growth tempered by social consciousness and a lack of self-interest, as exemplified by Alberto Gonzalez, who pioneered community-based distribution programs in Costa Rica in the mid-1960s.

3. **Political**—focused on overcoming potential barriers to family planning services, as exemplified by the business leaders who pioneered family planning in El Salvador by building coalitions and maneuvering supporters into key positions.

4. **Bureaucratic**—able to analyze complex organizational processes and to make decisions and take actions within these contexts, as exemplified by government administrators who have mastered the bureaucratic rules and are able to achieve program objectives within the constraints imposed by these rules.

5. **Organizational**—concerned with encouraging creative and adaptive behaviors among workers at all hierarchical levels of an organization, as exemplified by Dr. Wasito, who mobilized public employees in all sectors and at all levels in East Java, Indonesia.

Ickis notes that the inspirational, entrepreneurial and political patterns of leadership have been effective in introducing social innovations through private programs, while the bureaucratic pattern is more appropriate for public-sector programs.

These leadership patterns may be combined effectively in the launching of new programs. For example, the skills of Dr. Cabezas and Mr. Gonzalez reinforced and complemented each other in the formation and growth of the Costa Rican Demographic Association. In fact, a combination of patterns is essential for effective performance. Since such combinations are unlikely to be present in a single organization, interorganizational networks are essential (Ickis, 1987).

Another key point is that different leadership patterns may be appropriate in different national contexts. Ickis (1987:155) explains, "The style and methods of innovation of Cabezas and Gonzalez, effective in the relatively permissive and open society of Costa Rica, would have violated the norms and conventions of Salvadoran society, where careful constituency-building by members of the country's elite was more appropriate."

Simmons and Lapham (1987) emphasize that leadership and political support are synergistic. In countries where family planning is given strong political support, more effective administrators are more likely to be selected to work in the program, while effective administrators in turn may be more adept at mobilizing political support. They summarize the many roles leaders have:

> They must relate to the political and economic groups that determine the budget and the mandate for the family planning program. They must establish national strategies for delivering family planning services, and they must ensure that the programs designed to implement these strategies are well managed. Generally, leadership both inside and outside the program plays an important role in marshalling the support among elite groups which is necessary for effective programs (Simmons and Lapham, 1987:702).

While research findings on the relative importance of leadership in relation to other program factors are not available, many observers believe that leadership does make a difference (Finkle and Ness, 1985; Simmons and Lapham, 1987).

XI. Conclusions

In general, program management has received insufficient attention among family planning leaders. Possible reasons for this neglect include the medical/demographic background of many leaders, a focus on other program priorities such as sheer survival, the pressure to expand programs rapidly, and limited donor interest in this area. As programs grow in complexity, the problems resulting from weak management systems become more obvious, and organizations are compelled to introduce some rational systems. The more successful family planning programs have paid close attention to key aspects of management and have striven to continually improve their systems.

According to the principles of strategic management, there is no single "best" solution to the various problems that organizations face. Each organization must work out the most appropriate response to a given situation. Nevertheless, managers could benefit from knowing more about possible options and their effectiveness in other settings. In the family planning field, the lack of research in many key areas affecting management decisions makes it difficult to generalize regarding the situations in which a given approach is appropriate. Even anecdotal evidence of the factors underlying program successes and failures is difficult to obtain. This problem is compounded by the fact that many programs do not collect basic information about program inputs and outputs and therefore have very little information on which to make decisions.

Logistics management remains the "Achilles heel" of family planning programs. Many programs experience depleted supplies of methods in demand and over-supplies of other methods. Lack of contraceptives not only leads to unplanned pregnancy but also erodes client trust in the service provider and undermines staff morale. The measures to correct deficiencies in logistics management are readily accessible. What is lacking is a commitment from high-level managers to introduce the necessary changes.

Staff development also merits more attention from managers, since high-caliber staff can make a major difference in program performance. While managers may not always have flexibility in staff recruitment, promotion and retention, they should strive to obtain the maximum leverage possible. Because little research has been done on the impact of training, managers should assess the relative effectiveness and costs of various approaches. The key factor in training content appears to be its relevance to the individual's job responsibilities.

As Finkle and Ness (1985) remark, effective management mainly involves paying attention to programs. There is no secret technology that will solve all problems. Rather, close attention to program performance and its impact on the surrounding environment will yield payoffs for every manager.

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